(3) *Location.* On roof of car. One (1) parallel to treads of each ladder, not less than eight (8) nor more than fifteen (15) inches from edge of roof, except on refrigerator cars where ice hatches prevent, when location may be nearer edge of roof.

(4) *Manner of application.* Same as specified in §231.1.

(d) *End handholds.* (Treads of end ladders are end handholds.) Same as specified for §231.27.

(e) *Existing box and other house cars with roof hatches.* Box and other house cars with roof hatches built on or before April 1, 1966, or under construction prior thereto and placed in service before October 1, 1966, shall be deemed equipped as nearly as possible within the intent of §231.1 and of this section when: Equipped as specified in §231.1, except (1) the side ladder treads above the fourth tread from bottom of side ladder near ''A'' end of car and roof handhold over the side ladder near ''A'' end shall be removed; (2) and (1) end platform handhold shall be provided on each end of car as specified in §231.27(i); and when handbrake is operated near roof of car a brake step shall be provided as specified by §231.1 or when handbrake is operated from approximate level of top of end sill the roof handhold over side ladder near ''B'' end and treads above the fourth tread from bottom of side ladder near ''B'' end shall be removed and a brake step as specified in §231.1 shall be used with top of tread surface level with or not more than four (4) inches below adjacent end handhold.

(Secs. 2, 4, and 6, 27 Stat. 531, as amended; secs, 1 and 3, 32 Stat. 943, as amended; sec. 6(e) and (f), 80 Stat. 939 (45 U.S.C. 2, 4, 6, 8, and 10, 11–16 and 49 U.S.C. 103(c)(1))

[33 FR 19663, Dec. 25, 1968, as amended at 49 FR 26745, June 29, 1984]

§231.29 Road locomotives with corner stairways.

After September 30, 1979, road locomotives with corner stairway openings must be equipped with (a) uncoupling mechanisms that can be operated safely from the bottom stairway opening step as well as ground level, and (b) the vertical handholds and horizontal end handholds prescribed in §231.30(e) and (g). No part of the uncoupling mechanism may extend into the stairway opening or end platform area when the mechanism is in its normal position or when it is operated. Each carrier shall so equip forty percent (40 percent) of its road locomotives by October 1, 1977, seventy percent (70 percent) by October 1, 1978, and all its road locomotives by October 1, 1979.

[41 FR 37783, Sept. 8, 1976]

§231.30 Locomotives used in switching service.

(a) *General requirements.* (1) Except for steam locomotives equipped as provided in §231.16 of this part, all locomotives used in switching service built after March 31, 1977, must be equipped as provided in this section.

(2) Except for steam locomotives equipped as prescribed in §231.16 of this part, all locomotives built prior to April 1, 1977, used in switching service after September 30, 1979, shall be equipped as provided in this section. Each carrier shall so equip forty percent (40 percent) of such locomotives by October 1, 1977, seventy percent (70 percent) by October 1, 1978, and all such locomotives by October 1, 1979.

(3) Locomotives without corner stairway openings may not be used to perform any switching service after September 30, 1979 except passenger car switching service at passenger stations.

(b) *Definitions.* (1) *Locomotive used in switching service* means a locomotive regularly assigned to perform yard switching service.

(2) *Switching service* means the classification of cars according to commodity or destination; assembling of cars for train movements; changing the position of cars for purposes of loading, unloading, or weighing, placing of locomotives and cars for repair or storage; or moving of rail equipment in connection with work service that does not constitute a road movement. However, this term does not include movement of a train or part of a train within yard limits by the road locomotive and the placement of locomotives or cars in a train or their removal from a train by the road locomotive while en route to the train's destination.

(3) *Safety tread surface* means that portion of anti-skid surface of a switching step that actually is contacted by a shoe or boot.

(4) *Uncoupling mechanism* means the arrangement for operating the coupler lock lift, including the uncoupling lever and all other appurtenances that facilitate operation of the coupler.

(c) *Switching step*—(1) *Number.* Each locomotive used in switching service must have four (4) switching steps. (See Plate A)

(2) *Dimensions.* Each such switching step must have—

(i) On locomotives built after March 31, 1977, a minimum width of twenty-four (24) inches and a minimum depth of twelve (12) inches, except when necessary to accommodate the turning arc of a six-wheel truck and its appurtenances, the inside edge of the switching step shall have a minimum width of seventeen (17) inches (See Plate B);

(ii) On locomotives built prior to April 1, 1977, a minimum width of eighteen (18) inches, and a minimum depth of eight (8) inches;

(iii) A backstop, solid or perforated, with minimum height of backstop of six (6) inches above the safety tread surface; and

(iv) A height of not more than nineteen (19) inches, preferably fifteen (15) inches, measured from top of rail to the safety tread surface.

(3) *Location.* Switching steps must be located on each side near each end of a locomotive used in switching service. The bottom step of the stairway at these locations may also serve as a switching step if it meets all of the requirements of this section.

(4) *Manner of application.* (i) Switching steps must be supported by a bracket at each end and fastened to the bracket by two bolts or rivets of at least one-half (½) inch diameter or by a weldment of at least twice the strength of a bolted attachment.

(ii) Vertical clearance must be unobstructed, except for minor intrusions created by mechanical fasteners or a small triangular gusset plate at the platform level walkway, and free for use for at least a distance of eighty-four (84) inches over a portion of the switching step that is not less than seven (7) inches deep by eighteen (18) inches wide on locomotives built prior to April 1, 1977, and of not less than seven (7) inches deep by twenty-four (24) inches wide on locomotives built after March 31, 1977.

(5) *Material.* (i) Steel or other material of equivalent or better strength and deflection characteristics, anti-skid, safety design, having at least fifty percent (50%) of the tread surface as open space must be used.

(ii) When the step material creates a second level safety tread surface, the maximum difference in surface levels may not exceed three-eighths (⅜) of an inch.

(iii) The safety tread surface must extend to within one-half (½) inch of each edge of the step.

(6) *Visibility.* The outer edge of each switching step that is not illuminated must be painted a contrasting color. On locomotives built after March 31, 1977, switching steps shall be illuminated; on multiple-unit locomotive consists used in switching service, only the front switching steps of the leading unit and the rear switching steps of the trailing unit must be illuminated.

(d) *End footboards and pilot steps.* (1) Except for steam locomotives equipped as provided in § 231.16, locomotives used in switching service built after March 31, 1975, may not be equipped with end footboards or pilot steps.

(2) Except for steam locomotives equipped as provided in § 231.16, locomotives used in switching service built before April 1, 1975, may not be equipped with end footboards or pilot steps after September 30, 1978. Whenever end footboards or pilot steps are removed from a locomotive, the uncoupling mechanism and horizontal end handholds of the locomotive must be modified to comply with paragraphs (f) and (g) of this section.

(e) *Vertical handholds.* Each switching step must be provided with two (2) vertical handholds or handrails, one on each side of the switching step stairway.

(1) On locomotives built after March 31, 1977, each vertical handhold must—

(i) Be constructed of wrought iron, steel or other material of equivalent strength and durability that is at least one (1) inch diameter and be securely

fastened to the locomotive with one-half (½) inch or larger bolts or rivets;

(ii) Begin not less than six (6) inches nor more than thirty-two (32) inches above the safety tread surface of the switching step; on units with high snowplows, each must begin not more than thirty-six (36) inches above the safety tread surface of the switching step;

(iii) Extend upward from switching step surface at least forty-eight (48) inches;

(iv) Be painted in a contrasting color to a height of at least forty-eight (48) inches above the safety tread surface of the switching step; and

(v) Provide at least two and one-half (2½) inches of usable hand clearance throughout its entire length.

(2) On locomotives built before April 1, 1977, each vertical handhold must—

(i) Be constructed of wrought iron, steel or other material of equivalent strength and durability that is at least seven-eighths (⅞) inch in diameter and be securely fastened with one-half (½) inch or larger bolts or rivets;

(ii) Begin not less than five (5) inches nor more than thirty-two (32) inches above the safety tread surface; on units with high snowplows, each must begin not more than thirty-six (36) inches above the safety tread surface;

(iii) Extend upward from safety tread surface of the switching step at least forty-eight (48) inches;

(iv) Be painted in a contrasting color to a height of at least forty-eight (48) inches above the safety tread surface of the switching step; and

(v) Provide at least two and one-half (2½) inches usable hand clearance throughout its entire length.

(f) *Uncoupling mechanisms.* Each locomotive used in switching service must have means for operating the uncoupling mechanism safely from the switching step as well as from ground level. No part of the uncoupling mechanism may extend into the switching step or stairway opening or end platform area when the mechanism is in its normal position or when it is operated. (See Plate A)

(g) *Horizontal end handholds.* Each locomotive used in switching service must have four (4) horizontal end handholds.

(1) Each horizontal end handhold must—

(i) Be constructed of wrought iron, steel or other material of equivalent strength and durability that is at least five-eighths (⅝) inch in diameter and be securely fastened to the locomotive with one-half (½) inch or larger bolts or rivets;

(ii) Be located not less than thirty (30) inches nor more than fifty (50) inches above the top of rail with its outer end not more than 16 inches from the side of the locomotive; on units with a high snowplow that makes normal end handhold location inaccessible, end handhold shall be located on top of plow blade, with the center of the handhold not more than fifty-three (53) inches above the top of rail, and be in line with the slope of the plow blade;

(iii) Be at least fourteen (14) inches long; and

(iv) Provide at least two (2) inches, preferably two and one-half (2½) inches, usable hand clearance throughout its entire length.

(2) An uncoupling lever may also serve as a horizontal end handhold if it complies with the requirements of this paragraph. When an uncoupling lever also serves as the horizontal end handhold, it is considered to be securely fastened if its securement brackets are attached to the locomotive by one-half (½) inch or larger bolts or rivets and its movement between those brackets is limited to the rotation necessary for performance of the uncoupling function.

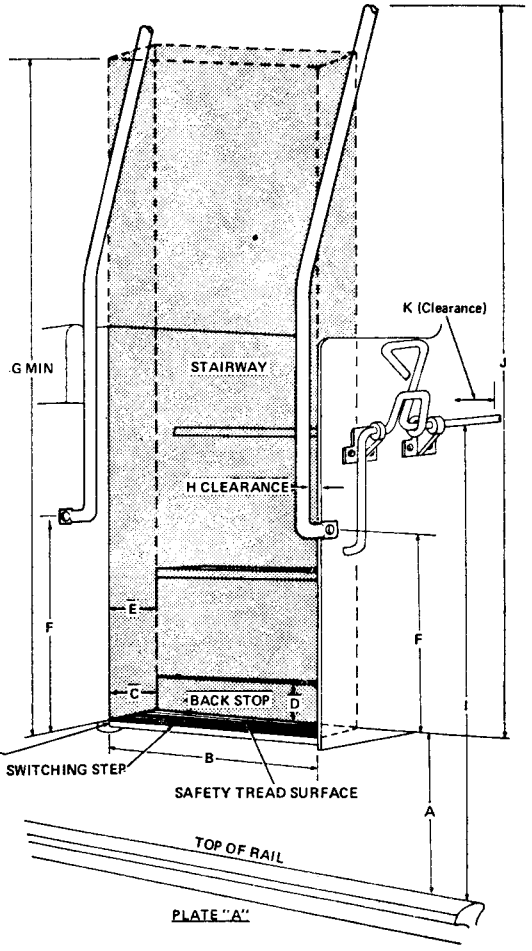
ITEM	DIMENSION NEW UNITS	DIMENSION EXISTING UNITS
A. Height of switching step above rail	15" preferred 19" maximum	15" preferred 19" maximum
B. Minimum width of switching step (between stairway supports)	24"	18"
C. Minimum depth of switching step	12"	8"
D. Minimum height of backstop	6"	6"
E. Minimum distance from front edge of switching step to front edge of first step above	7"	7"
F. Distance above switching step for start of vertical handholds Minimum-Maximum	6"-32"	5"-32"
EXCEPTION: Maximum for units with high snowplows	36"	36"
G. Clear height above switching step	84"	84"
H. Vertical handhold clearance	2½" minimum	2½" minimum
I. Height above top of rail for horizontal handhold or uncoupling lever if used as horizontal handhold	30"-50"	30"-50"
EXCEPTION: Maximum for units with high snowplow	53"	53"
J. Minimum height above switching step of vertical handhold	48"	48"
K. Horizontal handhold clearance or uncoupling lever clearance if used as horizontal handhold	2'-2½"	2'-2½"

NOTES:

1. Switching steps must be supported by a bracket at each end and fastened to the bracket by two bolts or rivets of at least one-half (½) inch diameter or by a weldment of at least twice the strength of a bolted attachment.

2. The outer edge of each switching step that is not illuminated must be painted a contrasting color.

3. Vertical handholds must be painted in a contrasting color to a height of at least forty-eight (48) inches above the safety tread surface of the switching step.



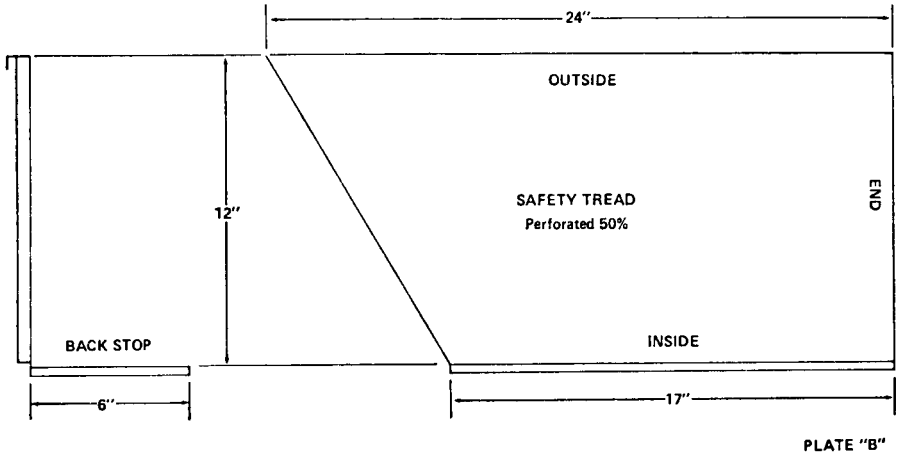


PLATE "B"

SWITCHING STEP SHOWING INSIDE RELIEF FOR CLEARANCE OF SIX-WHEEL TRUCK

[41 FR 37783, Sept. 8, 1976]

APPENDIX A TO PART 231—SCHEDULE OF CIVIL PENALTIES [1]

FRA safety appliance defect code section [2]	Violation	Willful violation
110.A1 Hand Brake or Hand Brake Part Missing	$5,000	$7,500
110.A2 Hand Brake or Hand Brake Part Broken	5,000	7,500
110.A3 Hand Brake or Hand Brake Part Loose or Worn	2,500	5,000
110.B1 Hand Brake Inoperative	5,000	7,500
110.B2 Hand Brake Inefficient	2,500	5,000
110.B3 Hand Brake Improperly Applied	2,500	5,000
110.B4 Hand Brake Incorrectly located	2,500	5,000
110.B5 Hand Brake Shaft Welded or Wrong Dimension	2,500	5,000
110.B6 Hand Brake Shaft Not Retained in Operating Position	2,500	5,000
110.B8 Hand Brake or Hand Brake Parts Wrong Design	2,500	5,000
114.B2 Hand Brake Wheel or Lever Has Insufficient Clearance Around Rim or Handle	2,500	5,000
114.B3 Hand Brake Wheel/Lever Clearance Insufficient to Vertical Plane Through Inside Face of Knuckle	2,500	5,000
120.A1 Brake Step Missing Except by Design	5,000	7,500
120.A2 Brake Step or Brace Broken or Decayed	2,500	5,000
120.A3 Brake Step or Brace Loose	2,500	5,000
120.B1 Brake Step or Brace Bent	2,500	5,000

APPENDIX A TO PART 231—SCHEDULE OF CIVIL PENALTIES [1]—Continued

FRA safety appliance defect code section [2]	Violation	Willful violation
120.B2 Brake Step or Wrong Dimensions	2,500	5,000
120.C1 Brake Step Improperly Applied	2,500	5,000
120.C2 Brake Step Improperly Located	2,500	5,000
120.C3 Brake Step With Less Than 4″ Clearance to Vertical Plane Through Inside Face of Knuckle	2,500	5,000
120.C4 Brake Step Obstructed or Otherwise Unsafe	2,500	5,000
124.A1 Running Board Missing or Part Missing Except By Design	5,000	7,500
124.A2 Running Board Broken or Decayed	5,000	7,500
124.A3 Running Board Loose Presents a Tripping Hazard or Other Unsafe Condition	2,500	5,000
124.A4 Running Board Wrong Material	2,500	5,000
124.B1 Running Board Bent to the Extent that It is Unsafe	2,500	5,000
124.B2 Running Board Wrong Dimensions	2,500	5,000
124.B3 Running Board Wrong Location	2,500	5,000
124.C1 Running Board Improperly Applied	2,500	5,000
124.C2 Running Board Obstructed	2,500	5,000
126.A1 End Platform Missing or Part Except By Design	5,000	7,500

APPENDIX A TO PART 231—SCHEDULE OF CIVIL PENALTIES [1]—Continued

FRA safety appliance defect code section [2]	Violation	Willful violation
126.A2 End Platform Broken or Decayed	5,000	7,500
126.A3 End Platform Loose	2,500	5,000
126.B1 End Platform or Brace Bent	2,500	5,000
126.B2 End Platform Wrong Dimensions	2,500	5,000
126.C1 End Platform Improperly Applied	2,500	5,000
126.C2 End Platform With Less Than Required Clearance to Vertical Plane Through Inside Knuckle	2,500	5,000
126.C3 End Platform Improperly Located	2,500	5,000
126.C4 End Platform Obstructed	5,000	7,500
128.A1 Platform or Switching Step Missing	5,000	7,500
128.A2 Platform or Switching Step Broken or Decayed	5,000	7,500
128.A3 Platform or Switching Step Loose	2,500	5,000
128.B1 Platform or Switching Step Bent	2,500	5,000
128.B2 Platform or Switching Step Does Not Meet the Required Location or Dimensions	2,500	5,000
128.C1 Platform or Switching Step Improperly Applied or Repaired	2,500	5,000
128.C2 Platform or Switching Step Obstructed	2,500	5,000
128.D1 Switching Step Back Stop or Kick Plate Missing	2,500	5,000
128.D2 Switching Step Not Illuminated When Required	2,500	5,000
128.D3 Non-Illuminated Step Not Painted Contrasting Color	1,000	2,000
130.A1 Sill Step or Additional Tread, Missing	5,000	7,500
130.A2 Sill Step or Additional Tread, Broken	5,000	7,500
130.A3 Sill Step or Additional Tread, Loose	2,500	5,000
130.B1 Sill Step or Additional Tread, Bent	2,500	5,000
130.B2 Sill Step or Additional Tread, Having Wrong Dimensions or Improperly Located	2,500	5,000
130.B3 Sill Step Improperly Applied	2,500	5,000
132.A1 Side Missing Step	5,000	7,500
132.A2 Side Door Step Broken	5,000	7,500
132.A3 Side Door Step Loose	2,500	5,000
132.B1 Side Door Step Bent	2,500	5,000
132.B2 Side Door Step Having Wrong Dimensions	2,500	5,000
134.A1 Ladder Missing	5,000	7,500
134.A2 Ladder Broken	5,000	7,500
134.A3 Ladder Loose	2,500	5,000
134.B1 Ladder Bent	2,500	5,000
134.B2 Ladder Having Wrong Dimensions	2,500	5,000
134.C1 Ladder Improperly Applied	2,500	5,000
134.C2 Ladder Having Insufficient Clearance or Improperly Located	2,500	5,000
134.C3 Ladder Wrong Design	2,500	5,000
134.C4 Ladder Wrong Material	2,500	5,000
134.D1 End Clearance Insufficient	2,500	5,000
136.A1 Ladder Tread or Handholds Missing	5,000	7,500
136.A2 Ladder Tread or Handhold Broken	5,000	7,500
136.A3 Ladder Tread or Handhold Loose Except By Design	2,500	5,000
136.B1 Ladder Tread or Handhold Bent to The Extent That It May Be Unsafe	2,500	5,000
136.B2 Ladder Tread or Handhold Wrong Dimensions	2,500	5,000
136.C1 Ladder Tread or Handhold Improperly Applied	2,500	5,000
136.C2 Ladder Tread or Handhold Having Wrong Clearance	2,500	5,000
136.C3 Ladder or Handhold Improperly Located	2,500	5,000
136.C4 Ladder Tread or Handhold Obstructed	2,500	5,000
136.C5 Ladder Tread Without Footguards	2,500	5,000
138.A1 Hand or Safety Railing Missing	5,000	7,500
138.A2 Hand or Safety Railing Broken	5,000	7,500
138.A3 Hand or Safety Railing Loose Except by Design	2,500	5,000
138.B1 Hand or Safety Railing Bent	2,500	5,000
138.B2 Hand or Safety Railing Wrong Dimensions	2,500	5,000
138.C1 Hand or Safety Railing Improperly Applied	2,500	5,000
138.C2 Hand or Safety Railing Having Less Than the Required Clearance	2,500	5,000
138.C3 Hand or Safety Railing Improperly Located	2,500	5,000
140.A1 Uncoupling Lever Missing	2,500	5,000
140.A2 Uncoupling Lever Broken or Disconnected	2,500	5,000
140.B1 Uncoupling Lever Bent Will not Safely and Reasonably Function As Intended	2,500	5,000
140.C1 Uncoupling Lever Bracket Bent Lever Will Not Function Properly	2,500	5,000
140.C2 Uncoupling Lever Bracket Broken or Missing	2,500	5,000
140.D1 Uncoupling Lever Wrong Dimension	2,500	5,000
140.D2 Uncoupling Lever With Improper Handle Clearance	2,500	5,000
144.A1 Coupler Missing	5,000	7,500
144.B1 Coupler Height Incorrect	2,500	5,000
144.C1 Coupler Inoperative	2,500	5,000
145.A1 Kick Plates Missing	2,500	5,000
145.A2 Kick Plates Broken	2,500	5,000
145.B1 Kick Plates Wrong Dimensions	2,500	5,000
145.B2 Kick Plates Improper Clearance	2,500	5,000
145.B3 Kick Plates Insecure Or Improperly Applied	2,500	5,000

APPENDIX A TO PART 231—SCHEDULE OF CIVIL PENALTIES [1]—Continued

FRA safety appliance defect code section [2]	Violation	Willful violation
146.A Notice or Stencil not Posted on Cabooses with Running Boards Removed	500	1,000
146.B Safe Means not Provided to Clean or Maintain Windows of Caboose	1,000	2,000

[1] A penalty may be assessed against an individual only for a willful violation. The Administrator reserves the right to assess a penalty of up to $22,000 for any violation where circumstances warrant. See 49 CFR part 209, appendix A.

[2] This schedule uses section numbers from FRA's Safety Appliance Defect Code, a restatement of the CFR text in a reorganized format. For convenience, and as an exception to FRA's general policy, penalty citations will cite the defect code rather than the CFR. FRA reserves the right, should litigation become necessary, to substitute in its complaint the CFR and/or statutory citation in place of the defect code section cited in the penalty demand letter.

[53 FR 52933, Dec. 29, 1988, as amended at 63 FR 11623, Mar. 10, 1998]

PART 232—RAILROAD POWER BRAKES AND DRAWBARS

Sec.

AUTHORITY: 49 U.S.C. 20102–03, 20133, 20141, 20301–03, 20306, 21301–02, 21304; 49 CFR 1.49 (c), (m).

SOURCE: 33 FR 19679, Dec. 25, 1968, unless otherwise noted.

§ 232.0 Applicability and penalties.

(a) Except as provided in paragraphs (b) and (c) of this section, this part applies to all standard gage railroads.

(b) This part does not apply to:

(1) A railroad that operates only on track inside an installation which is not part of the general railroad system of transportation; or

(2) Rapid transit operations in an urban area that are not connected with the general railroad system of transportation.

(c) Except for §§232.2 and 232.21 through 232.25, this part does not apply to a ''passenger train'' or ''passenger equipment'' as defined in §238.5 of this chapter that is subject to the inspection and testing requirements contained in part 238 of this chapter.

(d) As used in this part, *carrier* means ''railroad,'' as that term is defined below.

(e) *Railroad* means all forms of nonhighway ground transportation that run on rails or electromagnetic guideways, including (1) commuter or other short-haul rail passenger service in a metropolitan or suburban area, and (2) high speed ground transportation systems that connect metropolitan areas, without regard to whether they use new technologies not associated with traditional railroads. Such term does not include rapid transit operations within an urban area that are not connected to the general railroad system of transportation.

(f) Any person (an entity of any type covered under 1 U.S.C. 1, including but not limited to the following: a railroad; a manager, supervisor, official, or other employee or agent of a railroad; any owner, manufacturer, lessor, or lessee of railroad equipment, track, or facilities; any independent contractor providing goods or services to a railroad; and any employee of such owner, manufacturer, lessor, lessee, or independent contractor) who violates any requirement of this part or causes the violation of any such requirement is subject to a civil penalty of at least